

Claims:

Please amend the claims as follows:

1. (Currently amended) An automated device for diagnosis of a target, comprising:

means for performing first a white-light imaging assessment of the target;

means for simultaneously performing at least one additional second assessment of the target as a transparent background task to determine if the target is in a normal state or an abnormal state; and

means for performing an action based on said additional assessment; and

means for changing a visual output mode based on said additional second assessment comprising means for indicating a suspect region on said white light image by at least one of highlighting said suspect region and delineating said suspect region.
2. (Currently amended) The device of claim 1, wherein said additional second assessment comprises at least one fluorescence imaging mode.
3. (Currently amended) The device of claim 1, wherein said additional second assessment comprises at least one of reflectance spectroscopy and fluorescence spectroscopy.
4. (Currently amended) The device of claim 3, wherein said additional second assessment further comprises means for simultaneously performing at least one fluorescence imaging mode.
5. (Currently amended) The device of claim 2, wherein said additional second assessment further comprises means for simultaneously performing at least one of reflectance spectroscopy

and fluorescence spectroscopy.

6. (Previously presented) The device of claim 1, wherein said action comprises at least one of an audible alert and a visible alert.

7. (Currently amended) The device of claim 6, wherein said ~~further comprising~~ means for ~~manually~~ changing a visual output mode operates manually. ~~after said at least one of an audible alert and a visible alert.~~

8. (Currently amended) The device of claim 7, wherein said means for ~~manually~~ changing further comprises at least one of means for displaying fluorescence images, means for displaying spectroscopic data, means for displaying composite images, ~~means for highlighting said visual output mode,~~ means for delineating regions of said visual output mode and means for overlaying said visual output mode.

9. (Currently amended) The device of claim 6, ~~further comprising~~ wherein said means for ~~automatically~~ changing a visual output mode operates automatically. ~~after said at least one of an audible alert and a visible alert.~~

10. (Currently amended) The device of claim 9, wherein said means for ~~automatically~~ changing further comprises at least one of means for displaying fluorescence images, means for displaying spectroscopic data, means for displaying composite images, ~~means for highlighting said visual output mode,~~ means for delineating regions of said visual output mode and means for

overlaying said visual output mode.

11. (Currently amended) The device of claim 1, further comprising means to calculate a quantitative score based on said additional second assessment.

12. (Original) The device of claim 11, further comprising means to compare said quantitative score to a benchmark score.

13. (Original) The device of claim 11, further comprising means to display said quantitative score and said benchmark score.

14. (Currently amended) The device of claim 1, further comprising means for performing an action based on said additional second assessment and on *a priori* information relating to the target.

15. (Original) The device of claim 14, wherein said action comprises at least one of an audible alert and a visible alert.

16. (Canceled)

17. (Canceled)

18. (Canceled)

19. (Canceled)

20. (Currently amended) The device of claim 14, further comprising means to calculate a quantitative score based on said additional second assessment and on said *a priori* information relating to the target.

21. (Original) The device of claim 20, further comprising means to compare said quantitative score to a benchmark score.

22. (Original) The device of claim 20, further comprising means to display said quantitative score and said benchmark score.

23. (Currently amended) The device of claim 1, further comprising means for performing an action based on said additional second assessment and an analysis from a plug-in analyzer.

24. (Original) The device of claim 23, wherein said plug-in analyzer comprises at least one of a Raman probe, a fluorescence excitation-emission matrix spectroscopy probe, an optical coherence tomography probe, and a confocal microscopy probe.

25. (Original) The device of claim 23, wherein said action comprises at least one of an audible alert and a visible alert.

26. (Canceled)

27. (Canceled)

28. (Canceled)

29. (Canceled)

30. (Currently amended) The device of claim 1, further comprising means to calculate a quantitative score based on said additional second assessment and an analysis from a plug-in analyzer.

31. (Original) The device of claim 30, further comprising means to compare said quantitative score to a benchmark score.

32. (Original) The device of claim 30, further comprising means to display said quantitative score and said benchmark score.

33. (Original) The device of claim 1, further comprising an endoscopy positioning system.

34. (Currently amended) An automated method for imaging and diagnosing a target, comprising:

a first step of assessing the target based on a white light imaging mode;

a second step of simultaneously performing an additional assessment of the target as a transparent background task to determine if the target is in a normal state or in an abnormal state;
and

performing an action based on a result of said additional assessment; and

changing a visual output mode based on said additional assessment indicating a suspect region on said white light image by at least one of highlighting said suspect region and delineating said suspect region.

35. (Previously presented) The method of claim 34, wherein said second step comprises at least fluorescence imaging.

36. (Previously presented) The method of claim 34, wherein second step comprises at least one of reflectance spectroscopy and fluorescence spectroscopy.

37. (Previously presented) The method of claim 36, wherein said second step further comprises at least fluorescence imaging.

38. (Previously presented) The method of claim 35, wherein said second step further comprises simultaneous performing of at least one of a reflectance spectroscopy and a fluorescence spectroscopy.

39. (Previously presented) The method of claim 34, wherein said action comprises at least one of an audible alert and a visible alert.

40. (Currently amended) The method of claim 39, wherein said changing a visual output mode step comprises ~~further comprising~~ manually changing a visual output mode ~~after said alert~~.

41. (Currently amended) The method of claim 40, wherein said manually changing step further comprises at least one of displaying fluorescence images, displaying spectroscopic data, displaying composite images, ~~highlighting said visual output mode, delineating regions of said visual output mode and~~ overlaying said visual output mode.

42. (Currently amended) The method of claim 39, wherein said changing a visual output mode step comprises ~~further comprising~~ automatically changing a visual output mode ~~after said alert~~.

43. (Currently amended) The method of claim 42, wherein said automatically changing step further comprises at least one of displaying fluorescence images, displaying spectroscopic data, displaying composite images, ~~highlighting said visual output mode, delineating regions of said visual output mode and~~ overlaying said visual output mode.

44. (Original) The method of claim 34, further comprising calculating a quantitative score based on said additional assessment.

45. (Original) The method of claim 44, further comprising comparing said quantitative score to a benchmark score.

46. (Original) The method of claim 44, further comprising displaying said quantitative score and said benchmark score.

47. (Previously presented) The method of claim 34, further comprising performing an action based on said additional assessment and on *a priori* information relating to the target.

48. (Original) The method of claim 47, wherein said action comprises at least one of an audible alert and a visible alert.

49. (Canceled)

50. (Canceled)

51. (Canceled)

52. (Canceled)

53. (Currently amended) The method of claim 47, further comprising calculating a quantitative score based on said ~~combined~~ additional assessment and said a priori information relating to the target.

54. (Original) The method of claim 53, further comprising comparing said quantitative score

to a benchmark score.

55. (Original) The method of claim 53, further comprising displaying said quantitative score and said benchmark score.

56. (Original) The method of claim 34, further comprising performing an action based on said additional assessment and an analysis from a plug-in analyzer.

57. (Original) The method of claim 56, wherein said plug-in analyzer comprises at least one of a Raman probe, a fluorescence excitation-emission matrix spectroscopy probe, an optical coherence tomography probe, and a confocal microscopy probe.

58. (Original) The method of claim 56, wherein said action comprises at least one of an audible alert and a visible alert.

59. (Canceled)

60. (Canceled)

61. (Canceled)

62. (Canceled)

63. (Original) The method of claim 34, further comprising calculating a quantitative score based on said additional assessment and an analysis from a plug-in analyzer.

64. (Original) The method of claim 63, further comprising comparing said quantitative score to a benchmark score.

65. (Original) The method of claim 63, further comprising displaying said quantitative score and said benchmark score.

66. (Original) The method of claim 34, further comprising using an endoscopy positioning system.

67. (Currently amended) The device of claim 1, further comprising means for performing a third ~~second~~ additional assessment based on said action.

68. (Currently amended) The device of claim 67, wherein said third ~~second~~ additional assessment is performed automatically.

69. (Currently amended) The device of claim 67, wherein said third ~~second~~ additional assessment is directed interactively by a clinician.

70. (Currently amended) The device of claim 67, wherein said third ~~second~~ additional assessment comprises at least one of a fluorescence imaging, a reflectance spectroscopy, and a

fluorescence spectroscopy.

71. (Canceled)

72. (Canceled)

73. (Previously presented) The method of claim 34, further comprising a third step of assessing the target based on said action.

74. (Previously presented) The method of claim 73, wherein said third step is performed automatically.

75. (Previously presented) The method of claim 73, wherein said third step is directed interactively by a clinician.

76. (Previously presented) The method of claim 73, wherein said third step comprises at least one of a fluorescence imaging, a reflectance spectroscopy, and a fluorescence spectroscopy.

77. (Canceled)

78. (Canceled)